

Wyoming Makes Tremendous Forward Stride

Harvesting Alfalfa Grown by Irrigation.

Grand Canyon of the North Platte in Wyoming.

A Wyoming Irrigated Garden.

FACTS ABOUT WYOMING.

Area covered with timber	97,890 square miles
Area subject to irrigation	10,000,000 acres
Area subject to entry under United States laws	43,000,000 acres
Area of coal lands	20,000 square miles
Highest grade of soft coal known to man	
Father of modern irrigation law and reclamation act	
Foremost in application Carey desert land act	
World's famous rendezvous for large game	
Storehouse of almost every known mineral	
Largest deposits of iron ore known to the world	
Numerous large and productive oil fields	
Natural gas in commercial quantities	
Population (census '05)	301,816
Bank deposits	\$11,250,000 00
Increase over 1904	2,400,364 56
Deposits per capita	110 24
State's bonded debt	200,000 00
Bonded debt (12 counties)	1,064,140 00
School district bonds (all counties)	227,364 60
Total earnings state government	538,152 64
State levy	6 10 mills
Total valuation all property (assessment returns)	\$8,324,940 55
Increase over 1904	2,129,601 80
Mineral production	
Coal, tons (estimated), 5,130,000	15,390,780 00
Gold	100,000 00
Copper, pounds, 2,000,000	240,000 00
Silver	25,000 00
Iron, tons, 175,000	282,500 00
Building stone and other materials	100,000 00
Total value mineral production for 1905	\$16,218,280 00
Expended in development and permanent work (exclusive of coal mining)	510,000 00
Number and value of livestock—	
Sheep, 8,721,830	14,887,820 00
Cattle, 734,675	14,993,500 00
Horses, 124,012	4,984,450 00
Mules, 1,247	62,550 00
Pigs, 8,722	87,220 00
Total value livestock in Wyoming at close of 1905	\$34,714,870 00
Wool production in 1905, 30,180,000 pounds	4,026,000 00
Increase in value over 1904	810,000 00
Sheep marketed in 1905 (including lambs)	1,453,228 00
Value of sheep and lambs marketed	20,373,852 00
Total value exports of wool and mutton	11,872,352 00
Cattle marketed in 1905	221,306 00
Value of cattle marketed	4,984,450 00
Horses shipped out of the state	42,000 00
Value of horses marketed	1,720,000 00
Hogs marketed, 410,000	41,000 00
Total value livestock marketed	26,517,308 00
Total value livestock, wool and mineral exported	44,888,222 00
Total value agricultural products	15,081,177 00
Increase over 1904	1,110,000 00
Value of farm and grazing lands	23,179,810 00
New canals and extensions (miles, government and private)	16,920,000 00
Cost of construction	1,177,000 00
Lands reclaimed, acres	400,000
Lands segregated, acres	400,000
Lands leased by the state, acres	400,000
Receipts, rentals state lands	141,225 68
Receipts, rentals arid lands	4,621 00
Educational work completed in Wyoming during 1905, miles	322,572 00
New railroads under construction at close of year, miles	400
New railway projected for 1906, miles	1,100

Cheyenne, Wyo., Dec. 30.—The above figures will give some idea of the present greatness of the young state of Wyoming, and the possibilities for still greater prosperity. One need but glance at the bank deposits, and the value of the exports of coal, iron, gold, copper, silver, sheep, wool, cattle, horses, hogs, and the value of the agricultural and manufactured products to become thoroughly convinced that Wyoming now ranks with her sister states of the west in wealth and general prosperity. The banks of the state show deposits of over \$11,000,000, and this with a population of less than 300,000, which is a per capita deposit of over \$110 for every man, woman and child in the state. This showing surpasses that of any other state in the Union. The wonderful showing in bank deposits is accounted for by the unusual returns from the livestock industry, supplemented by the mining and agricultural industries and manufacturing, which brought to the miner, stockman and manufacturer a total of \$46,179,810 in 1905. Wyoming produced this handsome return during the year just closing, and it is only fair to presume that the state will do even better during the year just closing.

Wyoming's chief industry at present is the raising of livestock and wool, but the mining industry, and irrigated agriculture are crowding closely upon the heels of the livestock interests, and in the end one or both will win out.

Railroads Building to Mines.

In mining Wyoming did not make as much progress during 1905 as in the previous year. A vast amount of development work was done, especially in the Grand Encampment, South Pass, Douglas and Copper Mountain fields, but there was not the same activity as in the previous year. The reason for this was due to the fact that two of the leading camps anticipated early railway communication rather than to the lack of transportation, such as has been the excuse for many of the camps. The completion of two lines of railway connecting the district with the outside world, and the Copper Mountain district, are awaiting the arrival of a branch road which will run within a few miles of the numerous mines. With the completion of the line, the mines of these camps will be developed on a large scale, and many new properties will be opened. Anticipating the arrival of the railroads, which will make shipping propositions of many properties that cannot now be worked at a profit, eastern syndicates are making heavy investments, and preparations are being made for active work. In brief, Wyoming mines, outside of coal mines, and possibly one gold mine at South Pass and the iron mines of the Sunrise district, have amounted to very little until now, for the very good reason that all were located remote from lines of railway, and without transportation facilities the returns would be small. But now, with the prospect of the early completion of two additional lines of railway across the state from east to west, one from north to south, and with the building of numerous feeders, a new era is dawning for

the mining industry of Wyoming, from which we may expect great things during the next few years.

Immense Coal and Iron Deposits.

Wyoming has no less than fifteen large coal mines, and twenty smaller ones, with a total production annually of over 5,000,000 tons, and experts say the coal deposits of the state have scarcely been touched. New mines are being opened in all parts of the state, and inside of a few years the production will be double what it is today.

Wyoming has the largest known deposits of iron ore in the world. One of these deposits is located at Sunrise, in Laramie county, and another at Carbon county, and there are others. At the present time the entire output is shipped out of the state, but the time is not far distant when steel works will be established in the state and the raw material manufactured into the finished product at home, thus furnishing labor for thousands of men and increasing the demand for the state's agricultural products.

Among the minerals found in Wyoming in addition to coal, iron, copper, silver and gold, are the following: Bituminous shale, volcanic ash, graphite, asphaltum, manganese ores, epsom salts, building stones of all kinds, including marble and limestone, gypsum, plaster of paris, natural plaster, clay, tin, salt, quartz, glass sand, mica, feldspar, sulphur, bismuth, aluminum, talc, natural pigments, semiprecious stones, asbestos, sodas, lime, stone, hematite, platinum, uranium, iridium.

In the Salt Creek fields the Belgo-American company brought in several new wells, and the output of the Casper refinery was increased materially. In Uinta county a number of independent companies brought in wells, but few shipments were made.

In the Douglas fields work has been carried on steadily, and during the year large quantities of natural gas were encountered.

During the coming year the oil interests will expend more money than last year, and it is expected that at the close of 1906 the oil industry will take an important place among the other industries of the state.

But irrigation and prospective railroad building now occupy the center of the stage in Wyoming, for great things are anticipated from both.

Two National Irrigation Projects.

Two of the largest irrigation projects undertaken by the United States are lo-

located in Wyoming—the Shoshone in northern Wyoming, and the Pathfinder enterprise in southeastern Wyoming. The retaining dam of the former will be the largest in the world and will cost a vast sum of money. Surveys for both projects were completed last year, and actual construction work was commenced during the year just closing.

The Shoshone project involves the construction of a dam 310 feet in height. It will be built a distance of sixty feet from the bed of the stream to bedrock, and will therefore be 250 feet high on the lower side. It will have a base 108 feet long at the base and 180 feet long at the top. The spillway will empty into a tunnel, which will be driven through a solid mountain of granite a distance of 400 feet, through which the water will find its way back into the Shoshone river. The first canal, or high line canal, as it is known, will be taken out at the dam, which will be located just below the forks of the North and South Shoshone. This canal will run a distance of 2,000 feet in a tunnel through solid rock, the passage being known as the Corbett tunnel, immediately after leaving the dam. The distance from the dam to the mouth of the canyon is three miles, and in traversing this distance the high line canal will pass through tunnels aggregating one mile in length. The water is finally carried back into the river channel and will flow down to the diversion point near Corbett, a distance of six miles. The total length of this canal will be twenty-two miles, and its waters will irrigate a tract of 20,000 acres. At Eaglehead it will be divided into three main laterals for the irrigation of 20,000 acres north of Ralston.

The low canal heads in the Shoshone river sixteen miles below the dam site, or near Corbett station. A low diversion dam will be put in at that point. The first section will be a tunnel three and one-half miles long through sandstone and will be lined. Below the tunnel the water will enter the low-line canal, which will extend to Frannie, a distance of

forty-two miles, irrigating 80,000 acres.

The government engineers expect to have water in the Corbett canal in 1907. This canal will cover 100,000 acres below Cody. The total length of the canal will be eighty miles, and will cost \$2,000,000. The high line canal will have a total length of seventy-eight miles, it will cover 80,000 acres, and will cost \$2,500,000. Another canal, twenty-five miles long and costing \$200,000, will reclaim 30,000 acres.

The big Shoshone reservoir will impound 500,000 acre-feet, or 24,000,000,000 cubic feet of water, sufficient to reclaim 280,000 acres of land.

The total cost of the project follows: Dam and auxiliary structures, \$181,780; Corbett tunnel, \$254,000; twenty-five-mile canal, \$200,000; high line canal, \$2,500,000; Corbett canal, \$1,000,000. Total, \$4,135,780.

Lands under the Shoshone project can be reclaimed at an average cost of \$50 per acre, which, considering the ideal climate and the richness and productivity of the soil is very cheap.

What Pathfinder Scheme Means.

The Pathfinder project comprises a monster dam on the Platte river three miles below the mouth of the Sweetwater river. This dam will be 200 feet high, eighty feet long at the bottom and 175 feet long at the top, and will be located between granite walls in a narrow canyon. It will have a 144-foot base, and a thickness of sixteen feet on top. It will be an arch dam and will cost approximately \$500,000. There will be 50,000 cubic yards of masonry, and 5,000 yards of rock excavations. The bed of the stream is on bedrock, and it is not necessary to sink the dam as in the case with the Shoshone dam. Over 40,000 barrels of cement from the railroad at Casper to the dam site will alone cost \$120,000. There will be 400 pounds of cement to the barrel, and the material will be laid down in Casper at a cost of \$1.50 to Uncle Sam, while the material at the dam site will cost in excess of \$4.00 per barrel or about \$120,000.

The dam will be 12 miles long, costing \$2,500,000, and irrigating 140,000 acres, of which all is in Laramie county except 30,000 acres, which is in Nebraska. The interstate canal will be the next, and this will be ninety-five miles long. It will cost \$4,000,000 and will reclaim 30,000 acres in Wyoming and 100,000 acres in Nebraska.

Contracts have been let for the first forty-five miles of this canal, and it is expected the project will be completed in time to run water through it during the coming summer.

Cost Will Reach \$11,000,000.

The Pathfinder project contemplates the construction of numerous dams at the headwaters of the several canals, tun-

nels, flumes, etc., etc. The total cost of dam, tunnel, canals, etc., will approximate \$11,000,000.

Numerous enterprises have been undertaken by private capital, and among the more important is the Oregon Basin project, in Big Horn county, in the northern part of the state. This project contemplates the reclamation of 216,000 acres, at an estimated cost of \$800,000, but it is known that these figures are very low, and that when the work is completed more than million are a quarter dollars will have been spent. The project contemplates taking water from the south fork of the Shoshone river, turning it into the Sweetwater and North Platte river valleys. The flow of the Platte river is 1,800,000 acre-feet per year, and less than ten months time will be required to fill the big reservoir. During ordinary seasons the flow of water over the spillway will be sufficient for all needs, but in short seasons the regular flow of the Platte will be augmented by water from the big reservoir as it is needed.

The first canal below the Pathfinder dam will be known as the Casper canal. This will be eighty-three miles long, will irrigate 80,000 acres mostly in Natrona county and will cost approximately \$450,000.

The second canal will be known as the Douglas canal. This will be seventy miles long, will cost \$400,000, and will reclaim 30,000 acres mostly in Converse county.

The third will be the Goshute Hole canal, which will be 200 miles long and will reclaim 250,000 acres, mostly in northern Laramie county. This canal will cost \$3,000,000.

The fourth canal will be the Casper canal, which will be 120 miles long, costing \$2,500,000, and irrigating 140,000 acres, of which all is in Laramie county except 30,000 acres, which is in Nebraska. The interstate canal will be the next, and this will be ninety-five miles long. It will cost \$4,000,000 and will reclaim 30,000 acres in Wyoming and 100,000 acres in Nebraska.

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